IN THE CLAIMS

Please amend the Claims as follows.

25. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties formed by ~~the process of~~:

(a) providing a metal matrix of aluminum;

(b) providing said metal matrix in a liquid state containing a liquid titanium;

(c) reacting a salt bath containing a carbon with said liquid titanium element to form a uniform distribution of finely sized titanium carbide ceramic phase particles formed and dispersed in-situ uniformly in said aluminum metal matrix; and

(d) providing an aluminum alloy product having preferred mechanical properties formed from said uniform distribution of finely sized titanium carbide ceramic phase particles formed and dispersed in-situ uniformly in said aluminum metal matrix.

26. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 25, wherein said providing an aluminum alloy product having preferred mechanical properties comprises providing an uncrystallized structure during a deformation operation.

27. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 25, comprising increasing dispersion strengthening in said aluminum alloy alloy product having preferred mechanical properties.

28. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 26, wherein said uniform distribution consists of a substantially cluster-free distribution of no more than two particles attached to one another at a magnification of 500X.

29. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 28, wherein said finely sized ceramic phase particles comprise titanium carbide particles having an average particle diameter of less than about 1 micron formed and dispersed in situ in said aluminum metal matrix.

30. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~

as set forth in Claim 29, wherein said finely sized ceramic phase particles comprise titanium carbide particles having an average particle diameter of less than about 0.3 micron formed and dispersed in situ in said aluminum metal matrix.

31. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 30, wherein said aluminum alloy product having preferred mechanical properties comprises a high strength, light weight aluminum alloy having a high strength to weight ratio.

32. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 30, wherein said aluminum alloy product having preferred mechanical properties comprises an aluminum airframe.

33. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 30, wherein said preferred mechanical properties comprise a property selected from the group consisting

of increased recrystallization temperature, decreased grain growth in hot working, and elevated temperature strength.

34. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 25, wherein said uniform distribution of finely sized titanium carbide ceramic phase particles formed and dispersed in-situ uniformly in said aluminum metal matrix provide increased nuclei for grain refining in said aluminum metal matrix.

35. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 27, wherein said uniform distribution consists of a substantially cluster-free distribution of no more than two particles attached to one another at a magnification of 500X.

36. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 35, wherein said finely sized ceramic phase particles comprise titanium carbide particles having an average

particle diameter of less than about 1 micron formed and dispersed in situ in said aluminum metal matrix.

37. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 36, wherein said finely sized ceramic phase particles comprise titanium carbide particles having an average particle diameter of less than about 0.3 micron formed and dispersed in situ in said aluminum metal matrix.

38. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 37, wherein said aluminum alloy product having preferred mechanical properties comprises a high strength, light weight aluminum alloy having a high strength to weight ratio.

39. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 37, wherein said aluminum alloy product having preferred mechanical properties comprises an aluminum airframe.

40. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 37, wherein said preferred properties comprise a property selected from the group consisting of increased recrystallization temperature, decreased grain growth in hot working, and elevated temperature strength.

41. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 25, wherein said uniform distribution of finely sized titanium carbide ceramic phase particles formed and dispersed in-situ uniformly in said aluminum metal matrix provide increased nuclei for grain refining in said aluminum metal matrix.